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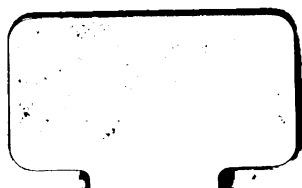
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TREATMENT OF ULCER
AND
GRANULATING WOUNDS.

ON
A NEW MODE OF TREATMENT
EMPLOYED
IN THE CURE OF VARIOUS FORMS OF
ULCER

AND
GRANULATING WOUNDS.

BY



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PREFACE.

IN proffering the following suggestions, and the results of an extended experience, honestly recorded, I do not desire to supersede the labours of many eminent predecessors. I do not refer invidiously, nor ungratefully, to authors, to whom science and humanity are alike indebted, but who not being infallible, cannot in the persons of their followers take offence at an endeavour to complete that which they left imperfect, by reason of the limits of their existence, rather than their want of ability. My references to many of their works are not scanty, nor are my allusions and dissent made in any other than a spirit of fairness, combined with feelings of respect and approbation.

The poor furnish by far the larger number of the cases to be considered ; and that, in great measure, as a consequence of poverty and its attendant evils. This large

prerogative of misfortune, gives the malady a double interest with the humane surgeon: thus, if to a large alleviation of pain, and increased chances of ultimate restoration, we add an abridgment of the period necessary to the cure, and thereby an economy of time, the only capital of the indigent, he finds in his success a degree of self-approbation, to which the approval even of the judicious, however desirable, is by comparison "poor and ineffectual."

Humanity may still derive another service too considerable to be overlooked, and surgery "moult no feather," though it be afforded fewer opportunities of displaying its attractive resources, which by a perhaps too active benevolence, are held to be more its glory, than its shame.

Amputation, the most humiliating, as well as the most mutilating, of all operations, and bringing with it an evil permanent, and redressible, but imperfectly, by the most ingenious devices of mechanics, the best of which, by reason of their costliness, are prohibited to the poor, is still occasionally performed on patients with incurable ulcerations, confessedly not malignant.

It is more that I fear the views I advocate may be pre-

judiced by an apparently overweening confidence on my part, than from any distrust of the future, confirming the confidence I entertain in the proposed remedy, that I hesitate to avow my unqualified belief in its competence to invariably supersede *all* operations, in the treatment and removal of non-specific ulcers.

With a careful diagnosis, a discriminating and judicious employment of the means, I believe, henceforth, the knife will be wholly unjustifiable.

Had I been actuated by any other motive, than that of communicating to my professional brethren, and through them to the public, an efficient means of curing an obnoxious and often loathsome disease, I should have selected for my subject, one more aristocratic in the circle of its influence, and necessarily more profitable in its treatment.

As a remedy against a disease, the ravages of which, if not more injurious to life, are at least more destructive to its occupations; to its physical duties; to the means of maintaining and upholding its best resources, and of extending its comforts, than any other that flesh is heir to—it claims a trial.

These are not times when a man can safely substitute a spurious popularity, for a well earned estimation with

the public, nor can he venture to challenge exception with impunity, from his professional brethren.

With this faith I publish the following pages, in the fullest reliance in the efficacy of the treatment recommended, and the consequent advantages derivable from its general, but discreet, adoption.

*14, Charter-house Square,
29th June, 1837.*

ON ULCER.

IT is difficult to give a perfect definition of the term *ulcer*, and the difficulty consists in this: that the line which bounds that form of disease produced by external violence, from that which is the result of ulcerative absorption, is conventional, and not real. The diseases are the same, as are often the means required for their respective reparation or cure, whether these parts have been removed internally by the absorbents, or externally by the knife.

The subject of ulceration itself, presents material of great interest to the pathologist; and one which, were I prepared for the task, would be at present foreign to the object I have in view, which is that of making known the results of some three or four years' experience in the treatment of ulcers and wounds of various kinds, in the hope that I may be enabled to simplify that of general adoption; and supposing the principles to be founded in nature, to avail myself of the experience of others, in

increasing the advantages to be derived from their more extended application.

By the term ulceration, I understand that effect of inflammation by which parts are removed by the absorbents, in detail. It is a condition allied to mortification, but falling short of it in degree only.

In gangrene the effect is sudden, extensive, and complete, and the structure destroyed is reduced at once to the condition of a foreign body. This the absorbents reject. Whereas the change effected by the ulcerative process is partial, and limited both in degree and extent, and the absorbents remove the injured structure before it has undergone those extreme changes, which would in the case of gangrene entirely alienate it from those around. But inflammation is an essential and immediate precursor, and it is probably in this circumstance only, that it differs from the phenomena of progressive absorption.

Unquestionably it is difficult to explain the nature of that process which we denominate *ulceration*, but we are quite certain that this action is essential to the formation of an *ulcer*. Is a solution of continuity in soft parts accompanied by an abraded surface, which may be the product of violence, whether mechanical or chemical, or of spontaneous formation, and the healing of which, excavated or otherwise, is uniform and uninterrupted—is this an ulcer? Are we warranted in applying the term ulcer, to a chronic excavation, produced designedly by the

hand of the surgeon, as in the case of an issue? I presume that, critically speaking, we must answer both these questions in the negative; and yet where lies the distinction? Is it sufficient to say that one is produced by external, and the other by internal, agency? for when the cause of their production has ceased, they are both reduced to a common condition; and supposing this, what more is required but the process of reproduction?

To the mere surgeon, no department of his profession excites a higher degree of interest than that which is attached to treatment; and as it is to this that I propose more especially to devote the following pages, I shall content myself with such observations on their cause and pathological condition, as will tend to elucidate the practice I am about to recommend.

Sir Everard Home adopted a very useful division of ulcers, founded on their excess or torpidity of action; and inasmuch as upon this condition of an ulcer does the appropriate treatment depend, I do not know that the subject is susceptible of a better. Sir E. devotes a chapter to the subject of the sensible and microscopic characters of the secretions from ulcerated surfaces. These secretions are now so generally known to the profession under the names of laudable pus, sanies, ichor, &c., that it is unnecessary for me to dwell on their respective characters. It is clear that healthy pus poured from the surface of an ulcer, is the product of healthy action, and that its presence

indicates a high degree of activity in the immediate agents of growth. The process of granulating is of necessity a slow one, while the action of the nutrient circulation is continuous. This secretion of pus on the surface of an ulcer, probably holds the same relation physiologically to the ulcer, that the gastric juice bears to the stomach, during its state of rest; being the product of the same vessels, but varying in their chemical as well as vital properties, from the same secretion under different states of action.

Pus is the product of superfluous circulation, secreted from the vessels engaged in the formation of the new material required in filling the cavity.

Whether healthy pus performs any active, or even any useful, part in its accomplishment, may be a matter of doubt; but it is supposed to lubricate and defend the granulation. That its influence is not entirely negative, may be inferred from the effect of absorbent applications. If a mass of the flue of dry lint be applied to an ulcer having healthy granulations (an application to which I shall revert more particularly hereafter), it will be found, that so long as the lint remains unsaturated, the effect on the ulcer will be that of a direct stimulant, which will rouse inactive granulations and depress the elevated granule of luxuriant growth; yet the same effect is not produced by long immersion in warm water, by which the pus is removed as fast as it is secreted.

The mode by which nature heals an ulcer involves three processes. First, the secretion of coagulable lymph*, of a firm consistence, and of an opaque greyish colour. For the purpose of organisation, and rendering them accessible to vessels, they assume small rounded granular forms, of an elevation somewhat less than their transverse diameters, their mean size in health being tolerably uniformly from the sixth to the eighth of an inch.

The Second process, which is, however, nearly contemporaneous with the first, is that of organisation. The blood-vessels may be seen, with a moderately good magnifying glass, to be distributed in arborescent forms from the base towards the circumference. Sir E. Home has described a healthy granulation to be small, florid, and pointed at the top; and it is indispensable to the healing of the wound or ulcer, that such granulations as Sir E. Home has described should be obtained, otherwise the sore will neither permanently fill up, nor cicatrise.

In order that this end may be healthily effected, it is necessary that a co-relation should subsist between the secreting and the organising powers. They must exist in the same degree, and act with the same force, neither

* The term "lymph," I am aware, is indefinite; and refers, as I conceive, rather to the physical than the chemical character of the product: strictly speaking, we are not warranted in its adoption to this animal substance, either in a physical or chemical sense. It is more probably either albumen or fibrine. I have, however, retained the term in general use.

preponderating ; the vessels secreting just as much lymph, and of that concentric form which they have the power to organise, and no more. If the organising process be not accomplished at first, in all probability it will not be accomplished at all, and the healthy advance of the sore is arrested by large flat gelatiniform granulations running into each other, and which, if they contain vessels at all, possess them in a very limited degree, and only at their base. Such granulations are insensible to the touch, and do not bleed on the application of violence. In other words, they are neither thoroughly organised, nor organisable.

On the other hand, the organising vessels may be too active, and the granulations disproportionate in size, to the quantity of their contained blood-vessels. Such granulations bleed on the slightest touch, even on the removal of the dressing ; and they are highly irritable.

The Third process is that of cicatrisation or skinning, which, with some rare exceptions, commences from the surrounding integuments, when the granules have reached their level, or nearly so ; and exhibits itself in the form of a thin semi-transparent film, extending from the circumference, which appears to flatten the granulations as it advances towards the centre. This gradually becomes opaque, and represents the skin which has been removed, the external surface being that of fine cuticle.

The activity with which this three-fold process is performed, will depend upon the tone and vigour of the cir-

ulation throughout the body, supposing it unaided by art, for, of course, local action may be excited by local means, without the participation of the general system.

An ulcer may, therefore, be taken as a good criterion of its general condition—a vital thermometer, by which the relative quantity of its animal heat may be gauged. Yet this is subject to important exceptions.

This animal heat, or these vital energies—for, as regards my present enquiry, they are the same thing—predominate in the trunk, and gradually diminish as we approach the remote parts of the body ; where the animal temperature is always lower, the circulation more languid, and the phenomena of inflammation more atonic.

That ulcers, or wounds of any description, are more difficult of cure in the remote parts of the body, is undoubted ; but why do ulcers on the legs predominate in so large a degree over every other part of the body ? It is scarcely sufficient to say that the legs are more liable to injury ; because a blow, or other injury, does not necessarily beget an ulcer ; and ulcers so frequently “ come by themselves,” without any, or with very inadequate violence, that it is irrational to refer them to this cause ; for assuredly the same amount of violence applied to another part of the body, would never produce an ulcer. The current explanation refers the liability to ulcer, to the weight of the lengthened column of blood in the veins. One would have supposed that nature had provided against

this evil, and had not exhibited such partiality in favour of one region over another. If the column be large, and the duty heavier, at least it is more divided, and the stages or valves more numerous. Mr. Underwood attributes the difficulty of healing ulcers on the legs, to the languor of the circulation in that portion of the body; and this he refers to its peculiar structure, being composed, he says, of much tendinous and ligamentous membrane, which possesses a small share of sensibility and few blood-vessels. Mr. Benjamin Bell refers it partly to the peculiar structure of the lower extremities, but more particularly to their "depending situation." Mr. Whately attributes it "almost entirely to their dependent situation." He considers that it is impossible to counteract entirely the disposition to oedematous swelling of the feet and ancles, even in health, which itself argues the weakness of the lengthened columns through which the returning blood and lymph have to ascend towards the heart. Surely it must be deemed unphysiological to refer the phenomena in question to any normal condition of the venous or absorbent systems, but that it is more reasonable to suppose that they hold some relation to the veins in a morbid state.

Certainly ulcers of the leg are frequently accompanied by a varicose condition of the saphenæ and their tributary branches; but that by no means proves their relation of cause and effect. We have frequently ulcers without

varix, and varix without ulcers, and both of these forms of disease occur more frequently alone, than do the two conjointly; nor do we observe any relation, as regards extent, between them, when they do co-exist; the ulcer may be small, and the varices extensive, and vice versâ.

In all works on this subject, we find a portion devoted to ulcers "dependent on varicose veins," or varicose ulcers. The only form of ulcer that appears to me fully entitled to the name of varicose, is that which is caused by inflammation of the vein, the bursting of the vein itself by ulceration, and is generally attended by hæmorrhage of a severe form; but we rarely find *this* to have been the precursor. As far as my observation has extended, I have not witnessed the striking advantages which have been reported to attend obliteration of the saphena and its branches, by operation or otherwise; and assuredly the cure, or even the improved condition of the varicose veins of the leg, is not generally consequent on that of the ulcer, although they obtain some temporary alleviation from the rest and horizontal posture to which such patients are usually subjected.

Sir E. Home speaks of this, his favourite mode of treating ulcers, coupled with varicose veins, as an operation of frequent performance; yet, out of the whole catalogue of cases, he does not refer to a single example in which the operation was attended with bad consequences. This is somewhat remarkable! I confess, I cannot clearly

see the connection between the two maladies, nor how an ulcer can find an obstacle to its healing in the varicose condition of the superficial veins, excepting in so far as they themselves are a fruitful source of local irritation.

To be sure, we are reasoning somewhat in the dark, having no direct means of ascertaining the condition of the minute veins around the ulcer, any more than the capillaries or absorbents, and probably all are involved. In this exigency, however, we resort to general principles. Now Sir E. Home says, "In consequence of the size (increased) of the vena saphena, and its numberless convolutions, the return of the blood from its smaller branches is so impeded, as to retard the circulation in the smaller arteries, and to interfere with their action in forming healthy granulations." If the size of the vena saphena were diminished instead of increased, I could understand the cause of obstruction in the small veins supplying it; these, by the bye, may or may not be in communication with arteries at *the base of the ulcer*, where the processes of healthy action are chiefly required; and, I should suppose, except for the contrary authority of Sir E. Home, that the larger the trunk of a vein, the greater the facility afforded for the transmission of blood into it from the smaller branches, and that, instead of obstruction of the capillaries, there would be every encouragement afforded to the arterial blood to advance.

Supposing the theory suggested by Sir E. Home to be

a correct explanation of the fact, how does pressure, by means of bandage or plaster, mitigate the evil, and afford relief?—yet Sir E. is among the first to recommend it.

If the labour of the smaller arteries be already so great, that it is with difficulty they overcome the obstruction, one would suppose that artificial pressure would increase it in a still greater degree, by diminishing the calibre of the returning vessels.

The opinions of various authorities on the causes of these morbid changes in the system of superficial veins, will depend on their respective views of the forces of the circulation. Those who attribute to the veins an active contractility, would naturally associate their morbid change, with their own impaired functions; but, believing as I do, that the remote veins are perfectly passive tubes, I am compelled to refer the cause farther back in the circulation, viz. to the capillary system, *which wants power for transmission*. Whether this *want* be primarily situated in the extreme arteries themselves, or whether in their nervous system, is of little moment, and the consideration of which would involve other questions foreign to my object; but it appears to me that nearly all the phenomena of disease in those parts of the body remote from the heart, denoting this languid action, may be referred to this system; not that the capillaries have any difficulty in finding room for the reception of the blood circulating through them, but in preparing it for delivery

into the veins. The fault is not with the veins, but in the arteries; and this transmission is by them effected so languidly, as in a great degree to deprive the smaller veins of the influence of their contractility. Thus the blood accumulates in the larger venous trunks, which, by some singular and as yet inexplicable caprice of nature, become knotted and convoluted to an extent quite surprising. Possibly the veins becoming dilated, and their valves inoperative, may assume this distorted arrangement for the purpose of obviating the evil consequences of increased downward pressure.

It is this same condition of the minute arteries, that explains the peculiar granulations incidental to the weak action, of the distant parts of the body; the same that explains the frequent occurrence of chilblains on the feet or hand, of gangrenous toes, and the rareness of the secretions, from wounds on the foot in unhealthy subjects, of good laudable pus.

If chilblains are the product of venous congestion—and that they are, I imagine will scarcely be denied—how do local stimuli influence them? By exciting action in the veins themselves? What action do these veins possess, or by what means can they be emptied of their blood, except by rousing the capillaries to increased action? The best and quickest treatment for chilblains is that by electricity, which I have repeatedly known temporarily to remove the evil, when not extensive, in the course of a few mi-

notes. Is it more probable that this peculiar and vital stimulus is exerted on the capillary or the venous system?

It should ever be kept in mind, that the consideration of this subject requires its division into the phenomena of ulceration, and that of its effect, or ulcer; and that although the presence or precedence of inflammation is an essential condition in the one case, it is by no means so in the other. If the inflammation which terminates in ulcer may be ever classed as sthenic, yet its force is exhausted by its crisis; and it probably no more retains the tonic or sthenic form, than do the exhausted actions which have destroyed the slough on a gangrenous surface.

Andral says, "I think it highly probable that the formation of those ulcers is owing to the inordinate accumulation of blood in the capillary vessels, which produces by its presence a local stimulus, such as would result from the presence of a foreign body." This may be perfectly true, and the primary cause lie with the capillary arteries wanting power to propel their blood.

Thus, during the progress of ulceration, local depletions may be, and doubtless are, frequently useful. Whereas in cases of ulcer, they are only so, when a degree of inflammation has been superadded, arising from causes foreign to the disease itself.

The power of reproduction, which may exist in the minute arteries of the extremities, is quickly exhausted, if allowed to fall below the standard of health; and, as

the healing process advances, it appears all but paralysed ; so that an ulcer advances towards its complete cicatrisation in a direct ratio of sluggishness, and will frequently require more active attention on the part of the surgeon after its reduction to a tenth part of its original magnitude, than before it. It would however seem unreasonable to refer this torpidity of action to any condition of the veins, the healthy functions of which may be fairly supposed to have been re-established during the advance of the ulcer towards cicatrisation.

Mr. Baynton's pamphlet was published in the year 1799, and, inasmuch as the practice recommended by him still very generally prevails in the treatment of ulcer—having stood the test of nearly forty years' experience—I shall venture to discuss its principles, because, admitting as I do its general efficacy, I differ, *toto cælo*, from the theory of its application.

In the first place, Mr. Baynton appears to me to have confounded the processes of *ulceration* and *cicatrisation* ; by the former of which an ulcer is made, by the latter is healed. Secondly, he has referred the root of the evil to the *absorbents*, instead of the minute secernent arteries, and supposes them the seat of a *deficiency of power*. It would perhaps be a species of ingratitude to the inventor of a remedial agent that has worked so much substantial good, were we minutely to criticise the reasonings upon which Mr. B. founded his practice and

subsequent treatise ; but it is necessary to my purpose that I state his general views. He conceives that the difficult return of blood from the lower extremities increases the quantity of the circulating fluid in the neighbourhood of the disease ; that, to relieve themselves, the arteries pour out lymph between the interstices of the muscles ; that the absorbents are weakened in their action by being mechanically separated from the arteries and deprived of their "arterial impulse." "And it appears certain," says he, "that such deficiency of power is a consequence of that diseased state of the *common integuments of the limb*, which failed to preserve parts in their natural situation."

The principle on which the application of the bandage is suggested by him is that, in recent cases of "approximating retracted parts," and affording a temporary substitute for the healthy integument, while in the more chronic form of the disease, "the remedy produces its good effects by preventing the greater deposition of that mucilaginous fluid which is constantly supplied to the interstices of the cellular membrane, for the purpose of its lubrication, than the absorbents can remove."

To me, I confess, all this borders on the mysterious. That lymph may be deposited in the cellular interstices of muscles, who can doubt?—but the idea that this deposition can form an ulcer, by the mechanical separation of the absorbents and the arteries, has at least the merit

of originality. And again, the conclusion touching the vitiated condition of the integuments appears to me most unwarrantable. Surely all this reasoning is unphysiological and unsound.

Under the head of ulcers that are "too weak to carry on the actions necessary for their recovery," Sir E. Home has classed those which are characterised by large whitish gelatiniform granulations; and properly so. These granulations consist of little else than unorganised lymph. They are bloodless and insensible to the touch. They indicate an excess of the material in its unwrought state, which has been too copiously deposited by the arteries to allow of the process of nutrition or organisation.

On a large ulcerated surface, otherwise moderately healthy, many granulations will occasionally exhibit this character, and they will be found to assume it in proportion to their magnitude: the smaller the size, the greater their manifestation of health.

This condition of an ulcer may be taken as an indication that the powers of secretion and nutrition are below par, that they are not competent to the completion of the task assigned to them, without the aid of artificial excitement. There is no description of granulation so easily and so rapidly formed, and, possessing little vitality, none is so easily removed by the absorbents; an attack of diarrhoea or slight local pressure, destroying a large crop in the course of a few hours. They are formed in large masses

in the sea-scurvy, a disease eminently of an asthenic type, accompanied by a copious exudation of uncoagulable blood. They never form a base for the process of cicatrisation, but advance above the level of the surrounding skin, and are generally moistened with a sero-purulent exudation.

There are two forms of ulcer to which the term *irritable* is applied; one characterised by deficient secretion of lymph, or the solid material, with a tendency to excess of organisation; the other, exhibiting a protracted ulcerative action. Of these two forms, the term *irritable* is the more appropriate to the first. The granulations, which are small and florid, are excessively sensitive to violence, and bleed on the slightest touch. Whatever be the care bestowed in dressing them, they almost invariably pour out blood, which appears to afford them a partial and temporary relief. The vessels being imperfectly covered in consequence of deficient lymph, approach too near the surface, and discharge their contents on the slightest provocation. Its peculiar disposition to bleed, and its attendant pain, often obtain for it the treatment by depletion, as though it were the product of tonic inflammation, which it certainly is not.

The second form of irritable ulcer, partakes of a phagænic character, and which is supposed to indicate some specific action in the system.

What is the precise meaning we attach to the terms local, constitutional, or specific, as applied to ulcers?

Are we correct in the application of the term "constitutional" to an ulcer, the inactivity of which is due to that of the circulation, or do we restrict it to what are termed specific ulcers? We have certainly no difficulty in its application to cancerous and such forms of disease; but, if we are justified in the use of the term constitutional to every kind of ulcer that partakes of the character of the general health, I presume we must class them all in that category.

Is that ulcer constitutional, that may be healed by general or constitutional remedies? If so, nearly all ulcers, certainly all the worst forms, are constitutional. What is meant by a strumous, a scorbutic, or a cachectic state of health? Does the first of these terms necessarily characterise a specific condition of the body, because there exists a tendency to disease of peculiar structures? This, however, may be doubtful; but, with respect to the terms scorbutic or cachectic, if their presence indicate a morbid condition to which the term *specific* may be correctly applied, then I think we must allow that every form of ulcer, the progressive march of which through the healing process is in any degree interrupted by internal causes, is a constitutional disease; for undoubtedly the best and soundest constitutions may be reduced, by loss of blood, unhealthy air or regimen, and various other causes, to a condition from which these cannot be distinguished.

Mr. Whately, in his "Practical Observations on the

Cure of Ulcers," says, "If wounds break out on the legs of persons labouring under diseased constitutions, there can be little probability of our healing them until the constitution be amended;" and I think he is right as regards a permanent cure. He speaks of the diseases of the constitution with which the subject is most concerned, as either "the venereal, the scrofulous, or the scorbutic;" and again, "that there is evidently another diseased affection of the constitution; but what name to give it, or what particular kind to pronounce it, is not so clear."

My object is to show that every form of ulcer not caused by external injury, that is interrupted in its healing process by causes not external, are in one sense, constitutional; that is to say, they take the type of the general health, and are remediable by internal therapeutic or dietetic agency.

Of course, I do not include those forms of ulcer that may be strictly termed *specific*, and from which I would exclude the cachectic, the phagedænic, the strumous, and the venereal; because I believe all to be incidental to a condition of health that may be developed by causes of a common kind, and, with certain exceptions, in any constitution, although in very various degrees of intensity.

I doubt the applicability of the term venereal (Qu. syphilitic) to any form of local ulcer occurring on the limbs, excepting such as arises primarily from direct contact of venereal poison; and these are necessarily rare:

but to suppose that noxious matter imbibed by the constitution in early life, should be enabled to resist the overwhelming torrent of the *antidote*, as it is termed, and after lying dormant for years, should creep from its hiding place, and disport itself at pleasure in the production of remote local ulcerations, appears to me a stretch of credulity that is only not amusing, because it involves a practice which is both antiquated and dangerous.

Some practitioners profess to discriminate this local venereal action, and to determine its presence in an ulcer, by a peculiar circular and ragged edge.

This I apprehend should be rather classed under the form of irritable ulcers, occurring in habits vitiated by former excess—morbid or weakened stamina—or more probable still, in those who have paid the severe penalty of early “indiscretion,” and garnered up an amount of “the antidote” sufficient to bid defiance to any manifestation of “syphilitic taint,” however equivocal, for the remainder of their lives.

The only form of sore, to which the term “local” may be warrantably applied, is that arising from external injury, which advances uninterruptedly towards its cure; but this can only occur in a healthy subject. Local wounds may assume the peculiar type of various diatheses, and may then be termed constitutional, though not specific.

Yet after all I do not know that much practical advantage can accrue from the above division, and I shall

not therefore dilate farther upon it ; I would only beg to protest against the general inference of specific virus, or specific action, and more especially against that which involves the ancient and obsolete doctrine of syphilitic taint, as unworthy the improved æra of modern surgery.

Although I conceive that the treatment I shall afterwards recommend, will be found applicable to every form of ulcer dependent on weakness—and in this catalogue I should include more than nine-tenths of those affecting the lower limbs, and a large proportion of ulcers situated on any other part of the body—yet there is none in which it will be found so striking as in that most frequent form of the chronic or callous ulcer, affecting the legs of old persons.

The true chronic ulcer is destitute of all action of a healthy kind. It may co-exist with varicose veins, or it may not. I have already stated why I doubt the solidity of that opinion, which places these two diseases in a nearer relation to each other, than mere co-existence. I do not believe, where they are associated in the same subject, that much advantage will be gained to the ulcer, by the partial obliteration of the veins. It appears to me, on the other hand, rather more reasonable to anticipate good to the veins by healing the ulcer, because the communication between these vessels and the small arteries which supplied them, will be in a more perfect degree re-established. But I am content to heal the ulcer, and if I can accom-

plish this without aggravating the condition of the veins; it is sufficient to warrant the treatment; but I believe I can do no more.

This form of ulcer may acquire a very considerable size without effecting any change in the former magnitude of the limb; but more generally the limb is swollen, and the torpor of the absorbents is manifested by the presence of a callous border, covered by white morbid cuticle, the base of the ulcer being in many instances depressed, to the extent of three quarters of an inch to an inch, below it. This cavity is not entirely the product of ulcerative action, as may readily be perceived throughout the progress of healing, during which the elevated border is absorbed, as the base is filled by new granulations, there being a reciprocal approximation. The secretion of the chronic ulcer, so long as it shall remain in a torpid condition, is ichorous, often abundant in quantity, and irritating to the surrounding skin.

I fully admit the good results of the plan of treatment recommended by Mr. Baynton, although I do not believe he had any distinct view of the principle of its application. I say the evil is not referable to the absorbents, but to the arteries, the veins, and the absorbents. During the *process of ulceration*, the absorbents work to their utmost in the removal of the effete matter produced by the excessive action of the arterial system. So far are they indirectly concerned in the production of ulcer; but having

removed the material disorganised by the inflammatory process, they remain perfectly passive. The ulcerative action having ceased, what remains to be done? To fill up the cavity by newly organised material, produced from secernent arteries, and by them alone.

The healing process of an ulcer is always more or less tardy, as the vessels whose office is required for its accomplishment may be in a state of reaction, or repose, following that of excess. Their energies are languid—their want of tone is indicated by their exhalation of a bloody serum, or of ichor. Rally them with stimuli and they secrete for a time good pus, but readily relapse into an inert and torpid state, on their removal.

The every-day history of a chronic ulcer, points to the morbid condition of the arteries, as the cause of the difficulty attendant on their cure. It is the want of material, and to produce this we excite them by the application of one or more out of a long catalogue of remedies. Mr. Baynton applied, in a modified form, that in most general use, and an admirable stimulant it is, *viz.* pressure.

The pressure was applied not merely to the ulcerated surface, but to the whole limb—he says, to produce absorption of lymph. I would say, as regards the ulcer itself, not “*to support the granulations*” by simulating the function of the skin,” because granulations require no support; however plausible the idea, there is nothing in the structure of a healthy granulation that demands the

assistance of art, to the end of rendering it efficient for the purposes by which it is designed by nature. The effect of pressure applied on the surface of an ulcer, is to excite to action, to rouse, to stimulate. Moderate pressure effects this under all circumstances. Pressure increased beyond this first degree, produces inflammation, and carried yet farther, occasions death. Between these in degree, there exists that of progressive absorption, for which purpose it is frequently employed to accelerate the healing process of an ulcer. Now what is the condition of that form of ulcer, which, according to ordinary experience, is most difficult to heal? I mean the chronic, callous ulcer of Sir E. Home, in which there are no granulations, nor healthy pus. We apply pressure, and the surface becomes red, and the purulent is substituted for the ichorous secretion. It forms a part of that natural process by which the energies of the part are stimulated, in strict accordance with the principles first systematically laid down in the admirable work of Dr. Thomson, to throw off the offensive contact of a foreign body.

The advantages of general pressure I am not convinced of, *quoad* the ulcer. That it acts as a general stimulant to the vessels of the limb in persons enfeebled by confinement and inactivity, I can readily believe; but I cannot persuade myself that it possesses an essential, or plays more than a very subordinate, part in the production of the healthy substitute for that which is removed.

But acknowledging to the fullest extent the merits claimed by the advocates of the plan in question, there appear to me one or two important drawbacks on its general applicability.—1st. The skin in many subjects is highly irritable, and it not infrequently produces in them the evil consequences of long continued irritation.—2d. It is a troublesome and a tedious application, and unless great care be taken to prepare the leg, it creates excessive pain on its removal, by detaching the hair from the skin.

Still it may be very justly said, These may be evils, but they are trivial in comparison with that of an open sore, which incapacitates its possessor for any active exertion, and promises to become his companion for life.

And doubtless there are cases in which long protracted disease has in a measure deteriorated the limb, in which the muscles are wasted by inactivity, where serous effusion or even lymph may be deposited in their interstices, producing extensive tumefaction of the whole limb, and impairing its symmetry.

In such examples, but they are not frequent, the effect of pressure must be invaluable, if not for the purpose of affording support, at least with a view to obtain absorption of the effused substance, by performing the office of a general stimulant.

Mr. Baynton adopts the opinion that the difficulty of healing ulcers about the ankle, or in any part of the body

remote from the heart, is dependent on the difficult transmission of the *lymph*, along the lengthened tube of the absorbent vessels. Why is it more difficult to heal any wound in close proximity to a subjacent bone, as on the tibia or malleoli, for example? Because the nutrient vessels of the part are few. Wounds of all descriptions heal, *ceteris paribus*, more freely in proportion as they are near the centre of the circulation, and more readily on the front, than on the posterior aspect of the body. Torpidity in passing through the healing process, is the characteristic of almost every description of wound in the remote parts. We find occasional diversions in favour of irritable, or even large granulations; but these form no real exception, and only exhibit the want of balance between the secreting and organising processes, which is indispensable to healthy growth. We may have predominant secretion in which the granule is large, flabby, and translucent, and but partially organisable; or we may have the irritable and congested granule, with organisation in excess; and in both of these, the approximate defect can but be referred to the formative vessels, in which the compound function, essential to growth, is unequally sustained.

It is, perhaps, a prevalent rather than a well-founded opinion, that we should exercise some caution in the attempt to heal ulcers of long standing. There is something plausible in the idea that apoplexy, or the development of some formidable disease, may supervene upon the

cessation of a long-continued drain on the circulation ; but is the opinion based on accurate observation and experience? I confess that that which I have possessed has not been sufficiently extensive in degree, to warrant any positive conclusions on the subject. Mine are only negative, but, as such, are favourable to the endeavour to heal any and every form of ulcer that is obnoxious to health or convenience. Undeniably there must be exceptions to this, as a rule of practice. For example, ulcers hold in check various forms of disease, the existence of which, often apparent, may be often reasonably deduced by diagnosis.

I may repeat, in the words of Mr. Whately, that I have almost invariably found that the consequence of healing a wound has been the amelioration of the whole system. Mr. Underwood, and Mr. Benjamin Bell, both express the same opinion. We have certainly many instances on record, of death ensuing from the removal of a long continued local irritant ; but it should be recollected that this change is sudden, and produces a shock to the *nervous system*. Whereas the healing of an ulcer is at all times necessarily slow, in comparison with the abrupt change effected by an operation. The reaction on the nervous system in the one case, is probably of a much more positive character than that on the circulating system, in the other.

As regards the treatment I shall hereafter recommend,

I have never successfully adopted it in any case of ulcer, without such manifest advantage to the health of the entire body, as would greatly outweigh, in my judgment, the apprehension of injurious consequences, and in which condition I cannot contemplate the existence of new disease as more than very remotely probable.

Much may depend on the station in society and habits of life of the subject. If, unaccustomed to corporeal exertion, he possess both means and inclination to pursue a life of indolent repose, some precaution may be necessary to avert a danger that, if not imminent, may at least be hazardous. If, on the other hand, dependent on his physical exertions for his subsistence, probably no preventive medical resource could prove more effective, than the daily sweat of his brow in maintaining the uniform and healthy distribution of his arterial blood.

I observe that no inconsiderable part of the subject discussed in works on ulcer, relates to the permanency of the cures, effected by the various modes of treatment, recommended by their respective authors. One author approves in the main the suggestions of another; but conceives the cures so obtained, to be neither firm nor durable; that a cure effected by caustic is preferable to that by pressure, or vice versâ.

I cannot imagine that a wound is more likely to be reproduced, when healed by one local remedy, than another. It must be evident that the local means have

stimulated the natural processes by which the cure has been effected ; be it caustic, pressure, or lint. One can readily understand that a sore healed by rest, may be reproduced by exercise ; or that rest may be injurious, where exercise has been adopted as the curative means.

Supposing a patient's occupation, during health, to demand active exercise, I presume it would be very desirable that the cure should be effected by means that were not incompatible with some exertion, during the progress of the treatment.

It may be said, of that which I shall recommend, that its effects are too rapid to be permanent ; that the cases are botched, not cured. I say they are cured ; and cured in the most effective manner that such diseases are susceptible of—by nature herself, unassisted by local means ; and there can be no comparison between local and constitutional means, as regards the permanency of the cure. By the former a local action is excited, which is essential to the completion of the work ; and if this action fail, the sore returns. The action itself demands the local excitant, to the permanent integrity of which, it is indispensable.

This might be calling botching the case, because the natural supineness of a convalescent will not contend against the irksomeness of the means required to maintain the cure, and hence the result,—relapse ; but where the necessary action is obtained through the medium of the

constitution, the constitution itself can only acquire the power, by virtue of its improved condition ; and this, were it necessary to continue the means, may be maintained without difficulty.

I have, for the most part, discontinued the treatment within a week of the process of perfect cicatrisation ; and, in general terms, I may say, I have had no relapses among those cases I have treated.

ON
SOME MEDICAL PROPERTIES OF OPIUM.

It is, doubtless, well known to all surgical practitioners, that Mr. Pott published a paper on the treatment of gangrene of the toes, or by the name under which it is more frequently known, of *gangrena senilis*. He expressly declares the disease not to be confined to subjects of advanced years, although these latter are the class of persons most obnoxious to its attacks.

The remedy was suggested to him by accident ; but its medicinal virtues became so apparent, as to supersede, in his judgment, that of the agent for which it was first employed as a temporary substitute. At the present day opium is as notoriously acknowledged the efficient treatment in the disease in question, as quinine in ague, or mercury in syphilis.

In the treatment of a particular disease, it is of little moment to determine the *modus operandi* of any remedy, provided its claim be fully and indisputably established ; yet, if we would generalise its application, and if the properties of the drug be such as to render it capable of an

extended or a general application, it is essential to the purposes of legitimate practice, that we endeavour to ascertain the mode or modes by which its influence is exercised.

On this subject, as far as relates to the use of opium as a remedy in gangrene, we can derive but little information from the authority of Mr. Pott, who appears to have adopted it on a very limited view of its general properties, having referred its utility in this disease almost exclusively of its power of soothing pain. He says, "Pain is always an evil;" (in the abstract it undoubtedly is) "but in this particular case I look upon it as being singularly so. Whatever heats, irritates, stimulates, or gives uneasiness, appears to me always to increase the disorder, and to add to the rapidity of its progress; and, on the contrary, I have always found that whatever tended merely to calm, to appease, and to relax, at least retarded the mischief, if it did no more."

Assuredly pain is a frequent concomitant of *gangrena senilis*; but it is by no means necessarily or invariably so; as Mr. Pott himself says, "In some few instances it makes its appearance with little or no pain, but in by much the majority of these cases the patients feel great uneasiness through the whole foot and joint of the ankle, particularly in the night." Did Mr. Pott confine the treatment by opium to the latter description of case? As he has not stated this, we must conclude that opium was the remedy

indiscriminately employed by him, in each form of the disease, and consequently that its salutary influence was derived from some property of the drug, foreign to that which he has assigned to it, viz. that of mitigating pain, —a property of infinitely higher value, and of far more extensive application.

It is somewhat remarkable that this property of opium, should have escaped the acute observation of Mr. Pott, who must have witnessed its employment in all forms of *gangrena senilis*, whether attended by pain or otherwise; and especially so, that he should have confounded an effect with its cause, and directed his remedial energies against the former, which is obviously but a symptom, and that an occasional one only. Yet it cannot detract from the merit of Mr. Pott as the discoverer of the fact, however imperfect may have been his theory of its application. He conceived and made known the efficacy of opium in the above form of gangrene, and the successful treatment of any particular disease is neither enhanced nor impaired by a correct apprehension of the principle of its application.

The writings of the Pharmacologists of the present century, have advanced far in dispelling the difficulties which attended the former employment of many remedial agents contained in our Pharmacopœia, and to no class have their exertions been more energetically and more successfully directed, than in those of narcotic poisons;

and among these, as one of the most efficient, and at the same time the most dangerous, is opium.

The specific effect of opium is on the nervous system. Administered in large doses its influence is felt more particularly by the cerebral organ ; while, in small doses, it promotes the most genial warmth, and by giving energy to the extreme arteries, it maintains an equable balance of the circulation, throughout every part of the body. It conveys to its remotest parts the activity and vigour of their centre. Those who, whether actuated by curiosity, or compelled by pain, to resort to the use of this valuable, though occasionally pernicious drug, can bear witness to the universally diffused warmth which characterises its action. It animates the powers which have already entered on the career of healthy action, and strengthens the energies of reproduction. Of its influence over disease I say nothing ; it is for the surgeon to determine the hour at which morbid actions have ceased, for then, and then only, can he resort to opium as his most efficient and valuable ally.

It is remarkable how precisely correspondent is its influence on the moral feelings and on the physical frame. "It communicates," says M. De Quincy, "serenity and equipoise to all the faculties, active and passive ; and with respect to the temper and moral feelings in general, it gives simply that sort of vital warmth which is approved by the judgment." "The expansion of the benign feelings

incident to opium *is no febrile access, but a healthy restoration to that state which the mind would naturally recover upon the removal of any deep seated irritation of pain* which had disturbed and quarrelled with the impulses of a heart originally just and good.”

In the same degree that opium soothes and tranquillises the moral, does it invigorate the physical frame, and animate the dormant energies of healthy action. While its beneficial influence on the one, demands the existence of some mental obliquity, some deviation from the standard of health, so the other, requires the previous existence of actual disease, the ravages of which demand assistance, from the powers of renovation.

Lest it be supposed that I am the advocate of a remedy to which the most severe, and even fatal effects, are occasionally traceable, let me at once state that the effects above described, are obtained only by the most moderate and innocuous doses.

The immediate action of opium is yet merged in doubt ; but all practitioners employ it with confidence,—first, as a stimulant ; and second, as a sedative. In its *smallest* doses, its powers as a stimulant, though necessarily limited, are succeeded by no perceptible depression, either as regards the pulse, or the nervous system. It is only in *moderate* doses that the exciting and sedative effects hold a very marked relation to each other ; and in these the sedative or depressing influence might almost be deemed the re-

action from its property as a stimulant. In larger doses, as is well known, it destroys life by its sedative action; the duration of its influence as a stimulant, being either too hurried for perception, or that influence being superseded entirely.

It is only in the first of these three forms of exhibition, that opium possesses the powers I have assigned to it—a power which I know not in what better terms to characterise, than that of rousing the dormant energies of local health through the means of the circulating system. Not more striking is the influence of a genial shower following long drought, in awakening the languid energies of the vegetable world, than is that of opium judiciously applied, in animating the exhausted vitality of some animal functions. I am not prepared to place any limit to its renovating influence; that knowledge will, doubtless, be obtained by others. Yet I know not why its advantages should be limited to the particular power it possesses in the cure of that kind of disease, which forms the subject of these pages. If it can promote the secretion of lymph from the capillaries of softer texture, why not of earthy salts from their appropriate vessels? If it accelerate the process of organisation of lymph, why may it not, in some protracted cases, abridge the tedious confinement essential to the union of fractured bone?

Opium appears to me, when administered in small doses, to excite the action of the minute arteries throughout the

body, and will thus act on the principle of derivation on actual disease, provided it be not resorted to during an acute stage. But I do not wish to represent this influence as limited to the arterial. I might, with truth perhaps, refer it to the remote distribution of the nervous system which superintends the functions of local health.

If I can establish its influence on the entire co-operating agents of circulation, exhalation, and absorption, perhaps I shall be justified in this deduction.

A healthy condition of a part demands a free transmission of arterial blood through the capillaries into the veins,—the exhalation of aqueous fluid, or of healthy pus, from the exhalent or secernent vessels,—the free return to the heart of the effete and carbonised blood,—and the perpetual activity of the absorbents, as subservient to that of the circulation.

This compound but co-ordinate process, so indispensable to the health of the entire body, is subject to the control of the nervous system, which maintains, during health, an uniform equilibrium of action between each separate part of the entire function; and it is upon this system, physiologically speaking, that the agency of opium is more especially exerted, although its influence is more *palpably* exhibited by the arterial, the natural condition of which is essentially active.

In illustration of the above-mentioned influence of opium, let us take the example of a common catarrh, or

determination of blood to the pituitary membrane—productive, as in very many instances, of greatly increased, and almost continued, secretion of watery fluid. Patients in that class of society who can command medical attendance on any trifling emergency, are subjected to the treatment by purgation, calomel, &c. *hora somni* ; black draught, *cras manè* ; and abstinence from food during the two following days.

For many years past, I have treated such cases with tincture of opium, given in doses of ten, fifteen, or twenty drops, which I was induced to adopt at the instigation of a medical friend and fellow student at St. Bartholomew's Hospital.

This gentleman was particularly obnoxious to various forms of catarrh, and, in consequence of great susceptibility to cold, could almost determine the quarter whence the wind blew before he rose in the morning. I remember, on one occasion, sitting beside him during a lecture, and observing that he used his handkerchief almost unremittingly during the hour ; and I have since repeatedly seen this gentleman, when attacked by catarrh, after taking fifteen drops of laudanum, immediately deposit his handkerchief in his pocket, and not require its use for an interval of one entire hour, or longer. In fact, the morbid secretion was arrested, the blood which supplied it being required in other parts.

It is worthy of observation, that no reaction follows

this treatment. The discharge does not recur with increased violence, and, if it return at all, is considerably lessened in quantity.

What are the sensible effects of the medicine thus administered? A general glow of warmth throughout the body, with an uniform degree of perspiration proportionate to the quantity taken. That the warmth of skin is an indication of healthy action may be inferred from this fact, that it relieves itself, if in excess, by cutaneous transpiration.

But I may be told that this sudden and beneficial change is due to the sedative influence of the opium on the stomach—a very sound opinion with those who deem the stomach the *primum mobile* of the whole system. This, they say, exhibits the sympathy between the stomach and pituitary membrane, conveyed through the medium of the sympathetic nerve. This is really absurd! A north-east wind does not require the aid of a disturbed stomach to produce catarrh, nor would any condition of that organ avert the evil from those susceptible to it, under similar provocation.

I may be reminded by a captious reader, that my expression, to maintain the balance of the circulation throughout the body by means of opium, implies ignorance of its well-known properties in promoting accelerated circulation in the brain, and thus, as some contend, producing sleep; in exciting increased action in the pudic

vessels, and claiming influence as an aphrodisiac ; of creating that peculiar irritation of the skin, more particularly in the scrotal and perineal regions, known under the names of *pruritus opii* ; but I am far from disputing its influence on these organs or textures, I am only prepared to dispute, or rather to deny, the influence of opium on either the brain, the genital organs, or the skin, when administered in doses of half-a-grain night and morning, to adult subjects, with *open and discharging wounds*. These patients are ordinarily most tolerant of its influence, and, in the doses in which I recommend its use, are insusceptible of such eccentric action. I have been convinced of the truth of this assertion, by repeated failure in the treatment by opium, of cases of irritable, and not ulcerated legs, of inflamed cutis—with dryness, and desquamation of the cuticle. In these cases I have frequently known the malady aggravated, rather than relieved, by its use. The dose given should hold a relation to the state of the wound and of the constitution ; and should always be an absolutely small one, although it may be comparatively large.

Opium is an invaluable remedy in the treatment of inflammation, immediately after its acute stage has succumbed to the modes of depletion which have been previously employed. I fully concur in the general opinion of its more than inapplicability—its positive danger—when administered during either the advance or the maturity

of inflammation, without premising depletion. In this state it aggravates, by producing an increased determination to the actively congested part; but empty the vessels, and reduce the activity, and I know of no means by which the next indication—that of maintaining the ground—can be so eminently fulfilled, as that of opium administered in small and repeated doses; while in larger doses, it is now universally acknowledged to prevent reaction, and to obtund the sensibility of the nervous system. Cases of this description so uniformly come within the province of the physician, that I cannot boast much experience; but that which I possess, has sufficed to assure me of the value of the principle.

I attended, in conjunction with other medical men, an infant of six months old, attacked with bronchitis. The disease was very active—two leeches were applied to the chest, with slight relief to the dyspnoea and cough. The improvement was temporary. The symptoms returned in an aggravated form, and two leeches more were applied. The cough was incessant, and the breathing more hurried, —pulse rapid, but softer.

I gave this child a drop of tincture of opium, and the cough became evidently less frequent. In the course of an hour, I gave it a second drop, and the pulse fell from 130 to 110; the cough was lulled, and the skin, from having been intensely hot, became of a natural temperature, and bedewed with moisture. The child recovered.

The influence of opium is most apparent on the capillaries of young subjects, where it almost invariably occasions a marked suffusion of the countenance ; and the effect is rendered still more evident, from the pallor which succeeds on the following day—the result of collapse.

I have no notes of sundry other instances in which I have employed opium, immediately after successful bleeding, in cases of peritonitis, consequent on operations for hernia, and in one case of inflammation of the bladder, following the operation of lithotomy. I do not mean to say that I succeeded in arresting the course of the inflammation in all these cases ; but I believe I saved the life of one of the above patients, and in the others I think I observed a marked benefit to arise from it. I am strongly inclined to believe, that if I could have divested my mind of the doctrines inculcated by men of higher authority, and more extensive experience than my own, I might, in these cases, have accomplished more.

The following case, which I quote from memory, will tend, in a positive degree, to illustrate the principle of action I have assigned to opium. It is, indeed, a disease similar to that of which I shall have occasion to speak hereafter ; but possessing a character derived from its locality. It was a case of passive hyperemia of the nose, in a lady aged fifty, of languid circulation and cold extremities, and of remarkably abstemious habits. It had existed for two years. The vessels upon the lower half

of the nose were greatly enlarged and meandering, though I cannot say they were varicose. She had been treated actively and passively, without success. She recovered from this obnoxious form of disease, under the internal use of tincture of opium, in ten-drop doses, three times a day, and without aperient medicine of any kind.

Here again, this class of case is almost invariably said to be connected with an irritable stomach. I should say, it was rather connected with a naturally languid circulation; for the peculiar treatment employed would offer a sufficient answer to the supposition that the disease is not founded on the want of digestive power on the part of that organ.

What influence opium might possess on those forms of hyperemia, or congestion of the vessels of the nose of Bardolphian dimensions and character which betoken "hot livers and cold purses," I cannot say. Every thing would depend on their activity and heat. If these be considerable, I conceive the practice would be worse than useless.

In the fifteenth volume of the Commentaries of the Scientific Society of Gottingen, is related the following extraordinary case, by Richter, which I make no apology for quoting, inasmuch as authorities on this subject are rare. The subject was a poor sailor, aged forty, having extensive ulcers on the feet, the soft parts being destroyed down to the ancle joints. He had swelling in the hams,

but these were not aneurisms. He suffered excruciating pain, more especially at night. The skin was excessively indurated and painful. He tried various remedies, internal and external, for fourteen days, without benefit to the spreading disease. "I was shocked at the extent of the disease. To procure sleep and relieve his pain, I gave him a grain of opium every four hours."

"Most unexpected and most salutary were the effects of this medicine. After continuing its use for three days, the foetid and gangrenous sloughs were thrown off from the surface of the ulcers; healthy pus was secreted; the pain was diminished, and at length was entirely removed. The induration on each foot became lessened."

"I persisted in the use of the opium, of which I administered single-grain doses every two hours, for twelve days. On the 16th day, when the ulcers were perfectly clean, and moistened with healthy pus, when the induration in each leg, and most especially that remarkable enlargement in the ham, had almost disappeared, and every thing promised a favourable result, *proh! pudor!* a great hæmorrhage burst from the wound in the right leg, during the night, which proved immediately fatal."

"Observe, then, in opium a most efficacious resolvent remedy. Assuredly I have never known an example of such extensive, induration so quickly and inwardly dispersed as that to which I am referring. It cannot be doubted that this patient was brought into an asthenic

state. Hence, opium, as a narcotic remedy in mitigating pain and the spasmodic constriction of the vessels, in obtaining absorption of the mass of fluids and of the indurated tumour, has been most efficient. Nor do I believe that any form of medicine but a narcotic could have accomplished the same purpose *.”

A question may naturally arise in the mind of the practitioner—Is there no drawback on the advantages of the treatment by opium? Can the constitutional health sustain no injury? May it not impair the digestive powers, nervous system, &c. I answer unhesitatingly, No, so long as artificial power be required. As long as there remains work to be done, the remedy may be resorted to with perfect impunity. I answer for nothing

* *Inexpectatus et saluberrimus hujus medicamenti erat effectus; continuato enim per tres dies illius usu, putridus ille et gangrænosus squalor a superficie ulcerum separari, pus bonum apparere, dolores mitescere, et tandem penitus silere, et quicquid erat in utroque pede duritiei emolliri inceperunt. Continuavi usum opii cujus, granulum unum quovis bihorio, dedi per 12 dies. Die 16, cum utrumque ulcus purissimum, optimo pure madidum esset, durities in utroque crure et imprimis tumor ille insignis in poplite penitus evanuerit, et omnia salutem promitterent, proh! pudor, noctu dormiente ægro, ingens hæmorrhagia ex ulcere cruris dextri orta est, quæ subito illum interimit. En! opium remedium resolvens efficacissimum. Certe exemplum tam ingentis duritiei cito et penitus resolutæ præter hoc quod enarravi, mihi quidem notum non est. Ægrotum de quo loquor in statu asthenico versatum esse dubitari nequit. Opium hic tanquam remedium narcoticum dolores mitigando et spasmos vasa constringentes, et accumulationem humorum tumoremque durum excitantes solvendo profuisse. Neque aliud quodcunque medicamentum excitans quod vi narcotica caret idem præstitisse opinor.*

farther. To this condition is the constitution reduced after copious bleeding, when we fly to opium as our most valued agent. Reduce but the activity of inflammatory action, and the experience of every day points to the inestimable advantage which is derived from the aid of opium, in effecting the uniform transmission of the circulation and maintaining its general equipoise throughout the body. So long as there exists a drain on the circulation, the influence of opium on the general health will be found, I will not say innocuous, but most beneficial.

I may, perhaps, be suspected of an attempt to exceed the line of truth, of indulging in romance or hyperbole, of attaching a fictitious or imaginary value to the treatment of certain maladies by means of opium. I can only reply by an appeal to fact. If I am wrong, I shall be readily refuted, if the statement be overcharged, its detection is easy. But before this be attempted, let me endeavour to define distinctly the extent to which that statement goes.

I do not profess to cure every, nor indeed any, description of ulcer by means of opium. There is great difference between *curing* and *healing* an ulcer. The term "to cure" is much more comprehensive in its application, and embraces every variety of change, whether healthy or morbid, through which an ulcer travels to the final process of perfect cicatrisation. The term to heal is applicable only to the last stage, including the secretion of lymph, its organisation by vessels and nerves, and the

investing process by the formation of skin ; and this power I claim for opium under certain essential restrictions.

For example : it is less efficient in florid or sanguineous temperaments ; not that its influence is less marked, but because such habits are usually deranged by all narcotics. It is less efficient in youthful age or childhood, from the natural susceptibility of both nervous and sanguiferous systems attendant on that period of life ; and it is objectionable in cases in which malignant disease is present in the system, to the development of which, I believe, it would exhibit a tendency, should the disease assume an active form, although its influence on the nervous system, when administered in larger quantities, is highly favourable to the mitigation of pain.

Excluding these exceptions, all of which are subject to other exceptions, the wards of the metropolitan hospitals teem with cases of ulceration amenable to the treatment by opium, in which, perhaps, in more than nine tenths the disease is situated on the lower extremities. Of these it will, I presume, require no considerable effort of the imagination to conceive a case of extensive ulceration of the leg—the subject, a man beyond the middle period of life, whose nervous system may have been more or less debilitated by disease, labour, and stimulating drinks, &c. His leg, or possibly both legs, may exhibit to any extent, between his knee and ankle, the dark red or brown discolouration of skin, the product of passive hyperemia,

surrounding a deep excavated ulcer, immediately encircled by a prominent whitish mound of morbid integument.

The hollow within presents a flattened or ragged base, covered by a layer of watery lymph, through which the exhalents may discharge, per diem, any proportionate quantity of the variety of fluids between healthy pus and watery ichor.

Of granulations there are none ; their material, appears to be exuded, rather than secreted ; and is deposited over the whole surface, in the form of an unhealthy and unorganised flake.

The discolouration of the general mass of skin surrounding the ulcer marks the erysipelatous-like inflammation consequent on drunkenness, or active exercise, but indicated on the sore by the layer of slough that invests it.

How is such a case to be treated ? Nearly the whole of the treatment at present adopted, is a modification of that of Mr. Baynton, who talks of bringing the edges together. This is impossible ; the margins of the ulcer are as firm and inflexible as a board. On enquiry we learn that the sore has been his companion for many months, and probably years ; that during this period it has assumed the variety of states incidental to active or irritating treatment, by locomotion. Soothing treatment by rest, abstinence, pressure, bandaging, caustic, precipitate, &c. &c. He tried such an hospital, and was discharged

convalescing; relapsed, became a patient at a Dispensary, which he attended with exemplary regularity for six months, and was discharged, improved; met with a slight accident, when he again applies at an hospital for relief, from which he is once more, after a residence of some weeks, discharged upon the town, deprived of the means of obtaining the only article of diet which can protect him against relapse, viz. gin. I appeal to all hospital surgeons, and to any man engaged in extensive public surgical practice, if this be not a true picture, and of almost daily occurrence,

The treatment that I recommend, I have adopted, both in public and in private practice, during several years. Now this principle demands the substitution of an internal or constitutional, for a local or mechanical agent. I do not mean to affirm its superiority from its involving that principle in the abstract; for it is of little import in what mode a disease is cured, provided the end be obtained; still, something perhaps may be claimed for that suggestion, which, by superseding a complicated local apparatus, compels the unaided powers of the constitution to perform its own work, and exhibits at the same time a gauge of the general health, by rousing the reparatory energies of the circulation.

This property I have long known in opium, and I was led to make trial of its efficacy, by reflecting on the rationale of Mr. Pott's treatment of gangrene of the

toes; and, having tried the experiment, I could readily appreciate the correctness of the following description:—
 “In nine days from the first administration of the opium, all the tumefaction of the foot and ankle totally subsided, the skin recovered its natural colour, and all the mortified parts began plainly to separate; in another week, they were all loose and casting off; *the matter was good*, and *the incarnation florid*.”

A second circumstance occurred to me which encouraged me to experiment farther on the influence of opium. A friend of mine, a man of languid circulation, of about thirty years of age, suffered during the winter months very severely from cold feet, and, having being touched by the absurd mania of opium-eating, which became so general after the publication of Mr. De Quincy's book, continued the practice by resorting to the use of the drug occasionally, and in the diminished dose of a single grain. While discussing with him, on one occasion, the subject of opium, he stated to me what he had long observed, that no article of clothing operated so effectually in keeping his feet of an uniform and agreeable temperature, as a single grain, or grain and half of opium; that he frequently resorted to it in cold weather; and that its effects on his general health were perfectly nugatory. This occurred to me in the summer of 1834, while on duty at St. Bartholomew's Hospital during the absence of Mr. Earle from town. My attention was directed to a case of

ulcerated leg, which had baffled the repeated efforts made to heal it, during a considerable period. The patient was a man aged fifty-five. The ulcer, which was about three inches in diameter, occupied the outer side of the right leg, at one-third of the distance between the ankle and the knee. It was much excavated, and surrounded by an elevated mound of morbid integument. Its surface was pale and flabby, without the vestige of a granulation, and secreting a watery ichor. He had occupied a bed in the hospital for two months, and during this period the usual routine of remedies, general and local, had been resorted to. In the minds of those around, who had repeatedly seen it, there was a difference of opinion, whether the sore was, or was not smaller since his arrival. I ordered all local applications, excepting lint moistened with cold water, to be discontinued, and prescribed for him half a grain of solid opium to be taken internally, night and morning. In three days it was evident that the sore was about to undergo some change, the secretions were improving, and the general tone of colour, as artists term it, was heightened. At the termination of the first week, the sore secreted healthy pus, and its base was covered with what Mr. Pott would have called, a florid incarnation. At the end of the second week, a second important change was in progress. The elevated margin was being reduced, and the granulations were rapidly rising towards its level. In one month, this antique sore,

which had defied bandages and escharotics, poultices and plasters, was in the last stage of existence, when the man left the hospital, under the assurance that he would return, if the sore did not progressively and rapidly reach its final consummation.

In many cases a very palpable effect is produced by eight drops of the tincture, twice a day; but I rarely commence with a less dose, than half a grain of the extract night and morning. The quantity will, however, depend on the age, sex, and constitution of the patient. Old persons bear opium better than young, and occasionally persons exhibit a peculiar idiosyncrasy, precluding its use altogether. An old person, varying from fifty to upwards, whose pulse is languid, whose skin is cool, and whose nervous system has been debilitated by indulgence in spirituous liquors, will take opium to almost any *medical* amount, not only with impunity, but with striking advantage. Yet in every case, however favourable in appearance, I commence with the dose above mentioned, viz. half a grain to two-thirds. On these conditions, however, it may be rapidly increased, if necessary, up to two grains night and morning.

It is a mistake to suppose that opium, administered under such conditions, disturbs or constipates the bowels, when frequently taken in any dose. It is more common to find it acting the part of a laxative, and, so far from any injury sustained to the health of the patient, there

is generally a consciousness of increased strength, improved appetite, and vigour of the frame.

As a general rule, for the purpose of ascertaining its unassisted influence, I have usually, in hospital practice, suspended all local treatment, such patients having continued the application of poultices, or some form of unstimulating ointment. It will be found most effective in cases of chronic ulcer, in old persons inclined by habit for spirituous drinks, and the leuco-phlegmatic, who have not been similarly addicted.

I have given it with certain limitations in all ages between fifteen and eighty, and its effects have been favourably exhibited on all parts of the body, least strikingly as regards time, on the legs, and most so on the head or trunk, where I have frequently seen ulcers healed in four days, that under other treatment would, I conceive, have required a very much longer period. Many of these cases have been treated under the critical and often acute observation of intelligent students, who have watched their progress with surprise and interest.

ON THE GENERAL TREATMENT OF ULCERS, AND CICATRISING WOUNDS.

WHEN an ulcer, or wound, occurring in a healthy subject, presents the characters of healthy action, we should interfere with nature's processes as little as possible. It should be washed daily, rather for the purpose of protecting the surrounding new skin, than from any advantage to be derived to the ulcer itself. It should be covered with some unirritating dressing, which ought to extend beyond the margin of the granulations, and rolled *simply* and *lightly*. If the granulations become enlarged, they will at the same time become pale. This indicates not want of action, but want of healthy action, or deficient energy in the agents of local or direct nutrition. If this state exist but in a slight degree, and forming but a small proportion of the whole surface, whether of ulcer, lacerated or incised wound, burn or stump, the surface may be exposed to the air for a quarter or half an hour, or even longer, and then dressed as before. If the transparent granulations are very luxuriant, more particularly if

they project above the level of the skin, they should be covered with the flue of dry lint, scraped with the edge of a knife, and applied to its surface in a considerable mass. The degree of tension with which it is bound, will depend on the necessity for obtaining the partial or complete absorption, of the new growth.

I have previously stated that the flue of dry lint is a powerful stimulant. When applied in masses on sluggish sores, I think it will be found eminently so, occasioning considerable pain for some time after its application. In one case, in particular, which I remember—that of a little girl having a small remaining wound on the shin bone, consequent on a burn—it caused so much uneasiness, that she could never bear it for a longer period than about half an hour.

The finer the flue is obtained, the better. It is most efficient if applied in a mass sufficiently thick to absorb the discharge, and keep the sore perfectly clean. I consider dry lint a preferable application to any form of stimulant or escharotic with which I am acquainted; and on this principle, that while the action of other stimuli, such as sulphate of copper, lotions of nitrate of silver, alum, &c. are momentary in their effects, this is permanent, or, at least, protracted. It meets an evil of long duration, with continued resistance. It not only stimulates, but maintains its stimulating properties, till it excite to re-action. I do not know that in cases in

which both remedies are applicable, it is at all times superior to pressure; but I am satisfied that it is a simpler agent, and infinitely less troublesome, both to the patient and the surgeon. It appears to me more uniform in its action, and consequently that its effects may be better calculated upon. In proportion to the fineness and the quantity of the lint, may it be classed among the escharotics, or stimulants; I have applied both terms to it. Of course, we stimulate torpid, but healthy action. We destroy the product of unhealthy growth. We encourage action so long as it takes the right direction. We suspend it if otherwise, and clear the ground of all obstructing material which can never permanently enter into the composition of the economy. Surely it is important to maintain these distinctions, although it may be difficult to draw the exact line in which they blend.

The general effect of an escharotic is the reproduction of a growth, similar to that destroyed, unless the germ of its growth be destroyed also. This effect, however, we endeavour to counteract by means local or general, through the agency of which a healthy, is substituted for a morbid action. If we merely destroy luxuriant ill-organised granulations, the new product will exhibit the same defective characters. If we burn down a wart to the level of the skin, we destroy the *product*, not the *action*, and the wart is reproduced; yet the same wart we can eradicate, by the persevering application of weak stimuli.

The same principle is illustrated in the treatment of gleet, a disease that appears to claim a right to existence, on the ground of long possession. The strong injection of sulphate of copper, *quasi* escharotic, suddenly contracts the exhaling vessels, and arrests the discharge, which returns with increased vigour ; while the persevering use of a very mild injection frequently will gradually wear it out.

With respect to pressure, I believe it to be a valuable agent in the treatment of ulcers, or wounds of any kind ; but I think its advantages, if they have not been over-rated, have at least been misunderstood. Moderate pressure to the surface of an ulcer operates as an excellent stimulant ; but, I confess, I doubt its efficacy when applied to the entire limb, except in those cases, which Mr. Baynton has described as so common, where the limb is disorganised by extensive deposits of lymph, "separating the interstices of the muscles," &c. Here moderate or even considerable pressure stimulates with great advantage, but not by its support to the veins ; its effect is on the minute arterial, and on the absorbent systems, and in cases such as these, so long as this inaction continues, I can suggest no substitute.

There is another condition in which the application of general pressure is admirable, it is that in which, in an extensive ulcer, the subject is precluded the advantages of rest. Here the support which it affords to the venous system, may compensate in some degree for the torpid

action of the minute arteries, and relieve the limb from that sense of fulness and consequent tension, which is always incidental to this condition of the part, when applied to the purposes of exercise or locomotion. Yet if we can remove the evil at its root, and excite the minute arteries to healthy action, even this, I believe, would be superfluous. The mode of applying pressure must be deemed by all objectionable. First, the occasional discomfort to the patient from faulty application, which is only to be met by great care on the part of the surgeon. Secondly, the length of time required in applying it. Thirdly, the expense to the poorer classes. Fourthly, the pain attending its removal. Fifthly, the irritating qualities of almost every description of adhesive plaster to the skin of many subjects.

These are disadvantages which demand some predominating good to counterbalance them; and, I doubt not, such good is occasionally found. My objection is rather of a negative, than of a positive kind. It is not that good may not be occasionally derived, but that it is resorted to indiscriminately, in cases in which other, and simpler treatment would be equally, if not more efficacious.

The form of pressure which I am in the habit of employing, is that effected by a common calico roller, carefully applied, but not too lightly. The pressure should diminish gradually as it advances up the leg, and more

especially if the sore be situated near the ankle. If the secretions of a sore be considerable, I generally apply poultices of any mild description, during the night, and simple dressing, or dry lint, during the day. So long as the ulcer is progressing favourably, we cannot be too careful in our selection of the blandest and the most unirritating local applications.

The subject of rest, as an essential condition in the treatment of ulcers, has been much discussed: some authors contending for its rigid observance, others permitting, or even recommending, moderate motion and exercise. There is, however, an important alternative in the latter treatment, which includes uniform and well applied pressure to the limb. For this suggestion we are indebted to the old school of surgery; to Wiseman, who first used the laced stocking. Its value was appreciated by Mr. Else and Mr. Benjamin Bell. Mr. Underwood substituted for the stocking repeated folds of a flannel roller. The same principle was adopted by Mr. Whately, and its application was rendered still more effective by Mr. Baynton, who used straps of adhesive plaster in addition to the roller.

Strict adoption of rest, and the recumbent posture, were enjoined by Mr. B. Bell and the French school of surgery of that date (1780). Exercise was not only permitted, but recommended, by Mr. Else, Mr. Underwood, Mr. Whately, and Mr. Baynton.

Mr. Underwood says, "Exercise contributes to destroy the loose and callous flesh on the surface, and thereby opens the way for the secretion of laudable pus, the best dressing that can be applied to a sore; inasmuch as it tends to promote a free and bold circulation of the blood, to open the small vessels, and restore a free passage in the system of lymphatics, whereby it increases the strength and vigour of the limb."

I do not know that much advantage can arise from any lengthened consideration of this principle of treatment; first, because between two parties of equal pretensions, maintaining opposite hypotheses, there is a great probability that the truth lies between them; and, secondly, because it would be very difficult to establish a general rule, which should embrace every variety of sore, or every description of constitution.

It does not appear to me that absolute rest is indispensable; and, supposing the granulating surface supported by a well applied roller, not often desirable. At the same time, I hold active exercise to be deprecated, so long as the vital energies of the part continue impaired. When those actions, of which healthy granulations are the product, are fully established, moderate exercise may be allowed upon the principle laid down by Mr. Underwood, viz. to effect a vigorous circulation of the blood and restore a free current in the system of the lymphatics.

But after all, there can be no difficulty in subjecting

each patient to the experiment. If the granulations suffer, they will promptly exhibit the change by increased vascularity and pain. If they remain uninjured, then they will derive positive advantage. At all events the arguments greatly favour the experiment of exercise.

If I could lay down a rule, I should say, that moderate exercise is unobjectionable in cases of what is termed the varicose ulcer, or ulcer accompanied with varicose veins, as its supposed cause. I have treated a large number of such cases, and the most striking examples of successful treatment which I have witnessed have been those in which no other direction was given to the patients (some of whom attended me at home, and others were out-patients of the hospital), than to take the opium pill night and morning. The very obvious advantages obtained from this treatment to the diseased veins, *even after the healing of the ulcer*, affords me every encouragement to persevere in the adoption of this principle. In severe forms of the callous ulcer, I should consider exercise as most inadvisable.

These patients, almost uniformly, require meat diet; and may be advantageously allowed a moderate indulgence in porter or gin, which is at once their cheapest, and their *dearest* beverage. The quantity of such stimuli, will depend on the dose of the opium prescribed.

Before I leave this part of my subject, I wish most especially to guard myself against misconception, by en-

forcing the importance of avoiding an indiscriminate resort to opium in all stages of ulcer. I have already in distinct terms acknowledged its inefficiency in the cure of ulceration. It will uniformly excite whatever action it may find, whether healthy or destructive. This is more especially the case in all local affections of the acute inflammatory kind. If it *accelerate* suppurative action, it will likewise *augment* it, and will even prolong and aggravate the inflammatory condition of the affected part. All positively morbid action must have ceased, or nothing but evil will be accomplished. If an ulcer betoken a sloughing, or even an inflammatory condition, the curative indication is not treatment by opium ; but by rest, ablution, poultice, or other soothing local means, and often by aperient medicine of a more or less active kind, according to circumstances. This end will generally require a period of from three to ten days, and then we may have recourse to opium, as the best means of remedying the evil affected by previous disease.

CASES.

THE treatment of ulcers, by the internal administration of opium, I have employed in the wards of St. Bartholomew's Hospital, during several years past, and for many opportunities of testing its value in that institution, I am indebted to the kindness and liberality of my friend and colleague, Mr. Earle, as likewise to Mr. Vincent, with whom I have only recently communicated on the subject. Of course these opportunities have not been few; but there has existed so little variety, that it would be useless to enter into the detail of even a tenth part of those, to which the treatment has been applied.

Of a large portion of these I have taken no farther note, than of the result. Those which I now publish contain the gist of the whole, and I have no doubt whatever, that a still more extended field of observation and experiment would greatly generalise the application of the treatment in question, and exhibit its efficacy in exciting healthy action in the systems of the arterial, venous, and absorbent capillaries, and bringing to a final crisis many obstinate forms of local disease.

The first class of cases I shall select from, are those of the callous or chronic form.

CASE I.

John Bryant, aged fifty-four, a labourer, was admitted into St. Bartholomew's Hospital, with a deep excavated ulcer, on the inner side of his right leg, just above his ankle joint. Its diameter was about four inches in all directions. It was surrounded by a high white mound, covered by morbid integument. This ridge was especially abrupt around three fourths of the circumference, and somewhat flattened in front, towards the tibia. The base of the sore was nearly smooth, and covered with a whitish flake of lymph, from which blood oozed in points. A blush of inflammation extended around the ulcer of an inch in breadth. When he removed the rags in which the ulcer had been enveloped, on his first arrival for examination in the receiving room of the hospital, they were saturated with an aqueous, and apparently acrid, discharge, which was very abundant in quantity. He acknowledged a strong penchant for gin; but porter, from one to two quarts per diem, was his staple drink, when in work. He suffered little pain from the ulcer, except after exercise. The wound originated, many years prior, in some trivial blow, and had never healed. He had been a patient for two months at another hospital, and at various dispensaries. The superficial veins of his leg were distinct and mean-

dering; but not varicose. I ordered him some mild aperient medicine, and a bread and water poultice to be applied to the ulcer.

On the fifth day the circumference of the ulcer had lost the blush of inflammation; but its surface was unaltered. I then put him on meat diet, and ordered him half a grain of extract of opium, night and morning. The poultice to be continued at night only; but, during the day, the ulcer to be dressed with spermaceti dressing. At the termination of the first week the matter was healthy, and the sore clean. The man's health appeared improved. At the termination of the second week, granulations were rising, full and florid, towards the surface; and the circular ring or mound was diminished in size, and covered by healthy integument. I increased each dose to three quarters of a grain of the extract. At the termination of the fifth week, the ulcer had so far healed, as to be diminished to one third of its original size. It had lost its chronic aspect, and to a stranger, had all the appearance of a recent ulcer. This man's health was greatly improved while under treatment.

CASE II.

Thomas Wright, aged forty-two, a mechanic, was admitted into St. Bartholomew's Hospital, on the 22nd of September, with an enormous ulcer on each leg, occupying two thirds of their circumference in front. The

margins were not by any means so elevated, as in the last case, but were even more abrupt. The action here had been evidently rapid, and the surface was covered by a foul and foetid slough. His superficial veins were not considerably varicose. His countenance, and general external character, bore the indication of a confirmed drunkard. The former exhibited patches of congested vessels, especially on his cheeks and tip of his nose, and his skin was pale.

This man, both as regards his local disease, and his general appearance, exhibited the aspect of perfect wretchedness. To my astonishment, he assured me (and I believe him), that he was most abstinent of drink, and had great repugnance to fermented liquor of all kinds. I ordered him a bread and water poultice, three per diem—chloride of soda lotion—and meat diet. On the 27th, I ordered him fifteen minims of tinct. opii, night and morning. On the 30th both ulcers were clean and granulating, and poured forth good laudable pus. On the 10th of the following month, I increased the quantity of the tincture to twenty-five minims twice a day, and ordered him a pint of porter. From this date the sores advanced with great rapidity; and he left the hospital on the 29th of November, both ulcers being *perfectly healed*—having been under treatment by opium, during one month, for two ulcers of the worst description I ever witnessed.

The above illustrate the effects of opium in cases of the

chronic or callous ulcer which abound every where, and of which I have at this moment the particulars, of from twenty to thirty successful examples, cured by these simple means. I have repeatedly known an ulcer, of about two inches diameter, heal in one fortnight, even when chronic; but when of more recent existence, and situated above the knees, their progress is occasionally very rapid. They will be accelerated by the slight pressure of a roller, but it is not essential to their steady advance towards cicatrisation.

I now proceed to mention some examples of what is termed the varicose ulcer, or ulcer combined with varicose veins.

CASE III.

I was consulted in the summer of last year, by Mrs. S., aged fifty, who had an ulcer on the left leg, about half-way between the knee and the ankle, and a varicose state of the superficial veins of each leg, but the right more considerably diseased, or perhaps more apparently so. The skin around the ulcer was of a dusky brown colour. The ulcer was of that superficial erratic kind that is generally combined with varix, irregular in form, and in diameter about two inches, by an inch and a half. The present state of the veins had existed about twenty years, and were referred by her to the period of utero-gestation. The ulcer had existed about two years,

and had defied every form of treatment, that various medical men could suggest. She had worn a laced stocking for many months, having been told that its constant application would heal the ulcer. Her pulse was low, and she was subject to cold feet; but, in other respects, she was to all appearance healthy.

I desired her to substitute a light roller for the laced stocking, to apply simple dressing to the ulcer, and to take ten drops of tincture of opium thrice a day; and, should the medicine constipate her bowels, to take some elect. sennæ occasionally, and to confine herself during the greater part of each day to the horizontal position.

I did not increase the laudanum, and the sore had perfectly cicatrised by the fifteenth day; and, in a month from that period, the surrounding skin made a considerable approach towards its natural colour. The varicose veins are diminished both in number and magnitude, and are only painful, after considerable exercise without support.

CASE IV.

I was requested by Mr. Goss, of Paternoster Row, to see with him a patient having an ulcer on his leg, which had bid defiance to all ordinary treatment.

The man was fifty-nine years of age. He had been a foreman in a large distillery for thirty years, and, being engaged in the actual distillation of the spirit during

many hours of most days in the week, doubtless inhaled a considerable quantity, without the trouble of drinking it, not that he was entirely indifferent to its stomachic properties. However, he was a temperate man, and his general health was good. About fourteen years ago, he burnt his leg with spirit, and the wound never completely healed. The superficial veins were very varicose, both above and below the ulcer, which was surrounded by an extensive patch of skin, of a dusky brown colour. The ulcer was superficial, but erratic; repeatedly healing in parts, and again ulcerating. Its dimensions were about five inches by three. He had a second accident five years ago, and the wound consequent on it, healed imperfectly.

When I first saw him, the wound was quite destitute of granulations, and was covered with a layer of brownish lymph. I recommended that all local treatment should be suspended, and that the wound should be lightly dressed during the day with simple dressing, and poulticed with bread and water at night; that he should resume his gin, of which he had been recently debarred, and take half a grain of opium night and morning. At the end of the first week, the surface of the ulcer was of a healthy colour, and secreted good pus. On the day fortnight, it was covered with florid granulations, and advancing rapidly.

On my third visit, which was paid on the same day of

the following week, the ulcer was not quite half its original size; and, on the day month on which he commenced the treatment, I paid my last visit—*the ulcer was healed*. The colour of the surrounding integuments was considerably paler, and the state of his veins considerably improved. During the month's treatment, he took no medicine except the opium, and had, in a degree somewhat limited by rule, continued his daily avocations.

This man had suffered from the presence of an open wound on his leg for fifteen years. He discards all local treatment—takes half a grain of opium, twice a day, for twenty-eight days—the sore heals—and, at the present date, five months after the treatment, I find the cicatrix still firm, the skin around it nearly restored to its natural colour, and the varicose veins of his leg so improved as to cause him no inconvenience of any kind. He continues, however, to wear a loose roller.

I do not represent this as a case of daily occurrence; for it is one of the most remarkable I have witnessed. I should injure the cause I am desirous to advance, were I to relate it without comment, or give an impression that the same amount of success will ordinarily attend this treatment; but at the same time I must add, that it is by no means a solitary instance.

CASE V.

A. B., aged forty-five, a porter, presented himself at the out-patient room of St. Bartholomew's Hospital, on the 3d of June, with painful varicose veins of the right leg. The veins were in some parts dilated to a diameter of half an inch, and were very tortuous and knotty. He acknowledged to have been addicted to drink in his younger days, but not lately.

He refers the enlarged veins to a small ulcer situated on his leg, *two years prior to their first appearance*. The ulcer was caused by mechanical violence. It healed, but left behind the present condition of the veins, which, during the last two months, has been attended with superficial livid ulceration of the skin, extending over a surface of four inches square, and exhaling a slight ichorous discharge.

He was ordered no topical application beyond warm ablution, and to take internally half a grain of opium night and morning.

June 8. He has paid no more attention to his leg since he commenced the treatment than heretofore; nevertheless, the ulcer is healthy. Its livid appearance is converted into a bright red; the veins are less apparently tortuous, less in calibre, and are emptied without the slightest difficulty. Ordered to continue his medicine, and return in four days.

June 9. The man was quite overjoyed, and no less surprised, at the rapid improvement his limb had undergone during the previous week. The ulcer was entirely healed. The veins had almost disappeared; so that, in passing the hand over the surface, the slightest irregularity only could be detected. All those who witnessed the progress of this case, expressed their astonishment at its rapidity and success. The man was discharged.

CASE VI.

A woman, aged forty-eight, tall, and of spare habit, came into St. Bartholomew's Hospital in the autumn of 1834, in consequence of hæmorrhage from a ruptured vein of the leg. She had been the subject of varix of the saphena and its branches, for many years. She had worn a laced stocking, and applied rollers almost constantly.

The exercise of her calling, as a washerwoman, was always attended with aggravation of the pain and general inconvenience. One of the larger branches of the saphena burst below her knee; but the hæmorrhage was arrested and the pain abated. It again recurred, and the vein again burst, when she came into the hospital. I desired the leg might be lightly bound and maintained in a raised position on a pillow, and she took an aperient. The pain and swelling subsided, but a small and painful ulcer formed at the point at which the vein had burst.

At the end of a month, I desired her to walk about the ward, when I observed the veins large and tortuous.

At that time I had not adopted the treatment of varicose ulcers, that I have since found so efficient; and, after keeping her in the hospital for some weeks, she left and resumed her occupation.

She called at my house, in the spring of the following year, with her veins by no means improved in condition, and exhibiting an ulcer on the site of the former one, superficial and irritable, of about the size of the palm of my hand.

I then ordered her half a grain of opium night and morning, the effect of which I then thought marvellous. At the end of the first week, she declared she had been more free from pain than she had been for years; and the ulcer for the first time exhibited healthy granulations.

In order to *maintain the same degree of influence*, I increased the dose to three-quarters of a grain. At the expiration of a fortnight, the sore had entirely healed; and, in one month, the enlargement of the veins, though apparent, was inconsiderable. She considered herself perfectly recovered.

CASE VII.

Thomas Smith, aged thirty, engaged in a warehouse as a porter, had varicose veins of the leg, accompanied with a small ulcer above the ankle. He had not been addicted

to indulgence in spirits, and was a perfectly steady and sober man.

The veins were large and the ulcer irritable. I desired him to poultice the sore at night, to bind it lightly with a calico roller throughout the day, and to take half a grain of opium night and morning.

The ulcer healed in a week, and at the end of a month the veins were considerably reduced in size, and caused him no inconvenience. He pursued his daily occupation uninterruptedly throughout the treatment.

The influence of opium in promoting healthy granulations, although more effective in chronic forms, is often more obvious, because more rapid, in recent ulcers.

In cases of wounds advancing torpidly, which appear to exhaust their formative energies before the cicatrising process is consummated, although the aspect of the granulations appears to undergo no change, opium in small doses will, if I mistake not, be found valuable, whether occurring in young or old subjects. I select the following cases from several.

CASE VIII.

John Whitfield, aged nineteen, received a wound on the shin bone, about six inches below his knee. His constitution appeared in every respect sound. Healthy granulations formed, and the progress of the sore ad-

vanced steadily towards its cure. When it was diminished to about two inches in dimensions, the healing process ceased, although the same treatment was continued. The granulations were florid, and the margin smooth. In this state it continued during one entire month, in spite of stimulating lotions, sulphate of copper, and dry lint. The man becoming impatient, and having expressed a wish to leave the hospital, I determined to try the effect of the opium, from which I had been previously averse.

I ordered him half a grain night and morning. The pain ceased entirely in the course of two days, and the ulcer rapidly healed, being at the end of a fortnight no larger than a sixpence. At the end of three weeks it had completely cicatrised.

CASE IX.

I have this day, May 25, discharged from the hospital John O'Brien, who was a patient in the venereal ward of Lazarus, which, by the kindness of Mr. Earle, is under my charge.

He was admitted about three months ago, with a foul phagedænic sore on the dorsum penis, that baffled every form of surgical treatment I could suggest—bark, sarsaparilla, hydriodate of potash, all failed; and the phagedænic action appeared to be suspended under the effects of large doses of the *mist. moschi*. This was ordered on the 10th of April. On the 18th, the sore again

became foul, but not phagedænic. His face and legs were now anasarcaous. In this state it remained, without the slightest advance, till the 9th of May, when I ordered him half a grain of opium night and morning, the sore at that time involving nearly the whole of the dorsum penis. On the 15th, the healing process had advanced with rapidity since he commenced the opium. Œdema greatly diminished, and general health much improved. 18th, granulations perfect, margin of sore smooth, sore lessened. At the present date, the sore has healed to the size of a finger-nail, and his health is re-established.

CASE X.

A man, aged thirty-eight, was admitted with phagedænic sores on various parts of his body, but more especially on his arms and head. After the phagedænic action had subsided, I commenced the use of opium, in half-grain doses, which I subsequently increased to a grain. The rapidity with which the ulcers healed excited my astonishment and that of all the dressers.

He left the hospital in three weeks after its first exhibition, in a most improved state of health, and with no other symptom of his former complaint, than existed in the form of so many well-healed cicatrices.

CASE XI.

Nor was the effect less remarkable in the case of a large ulcer on the leg of a patient, named Richard Wid-

combe, having porrigo favosa on his head and other parts of his body.

His face was perfectly pale and exsanguinous. The cutaneous disease was progressing favourably, but slowly, when, by permission of Mr. Earle, I ordered him opium in half-grain doses.

The white patches of the porrigo were large and numerous. On their separating, the destruction of the soft parts beneath the scales, was entirely repaired within forty-eight hours, and cicatrised.

The ulcer on the leg was of very large size. It came without apparent cause twelve years ago. At the present date, it more than half encircles the leg at the lower part of the calf, and is deeply excavated. During ten years it has been progressing, interrupted only by intervals of compulsory rest, some of which extended to two months at a time. During these, the sore made no advance in the healing process; and, judging of its condition throughout any single year, it appeared to be almost stationary. The local treatment of this man's ulcer has been that of poultices simply.

He commenced the use of opium on the 12th of May (I am now writing on the 30th). He says his health is greatly improved; the extreme pallor of his countenance is enlivened by a tinge of colour, and his appetite good. Having had some experience on the subject, he expresses his astonishment at the rapid progress his large

ulcer is making towards recovery, and for which he cannot account.

While making some inquiries on the subject of the case, of the sister of the ward, an intelligent person, she confirmed my opinion, by stating that she had seen but one case in which the advance towards recovery was equally, or even more rapid. On inquiring, I ascertained that she referred to the case of Thomas Wright, above detailed; and I confess that this spontaneous confirmation of the efficacy of the treatment I had adopted in both cases, was by no means disagreeable to me.

June 16. Within the last week, while under treatment by opium, the porrigo of the scalp has returned.

CASE XII.

The following case illustrates the same principle of action, but is a singular one, as involving a point of some difficulty in practice.

——— was admitted, with an immense growth of verucae on the prepuce, presenting a size, at least twice as large as the organ itself of which it forms a part. I put him under the influence of a short, but rapid salivation, limited to three days, all simpler local remedies having failed. Profuse ptyalism followed, and my attention was attracted to its effects on his mouth, tongue, and fauces.

Its influence on the warts was favourable; their vitality declined, and small portions dropped off. The

ptyalism became severe, and his tongue and cheeks extensively ulcerated. The discharge of saliva was most copious. I ordered him ten drops of tincture of opium every eight hours, inferring its probable advantage from its *anti-secreting* properties, as far as the salivary and mucous glands about the mouth and fauces are concerned. I think its influence was good; for he recovered from the salivating effects of the mercury in six days; whereas I had two other cases of profuse salivation, brought into the hospital in that condition, which, under other treatment, required a fortnight for their cure.

When he exhibited the warts, which I had not seen for many days, the whole surface of the prepuce seemed most actively engaged in their reproduction; the entire skin abounded with them in red and vigorous clusters, shooting forth in all directions.

Thus, in avoiding one evil, I effected a greater. Can it be doubted that this rapid growth was the effect of opium? I think not.

CASE XIII.

Thomas Gough was admitted into St. Bartholomew's Hospital, with ptyalism from the use of mercury prescribed for a papular and pustular eruption! He remained several days without treatment. But the ptyalism continued, accompanied by great lassitude.

On Friday, the 16th of June, I ordered him ten drops

of tinct. opii, three times in the day. On the following Tuesday, no symptom of mercurial action was apparent in his system. He stated that, immediately after commencing the opium, the discharge of saliva became perfectly aqueous; that the pain diminished in a great degree; and his mouth appeared to recover its natural state.

The last class of cases to which I propose to refer, relate to the influence of opium, not on the minute arteries alone in exciting them to healthy action, nor on the veins, but more especially on the absorbent system.

But here, were it necessary, I could shield myself under the high authority of Richter, whose opinion I have above quoted in favour of its properties as a *resolvent*: “En ! opium remedium resolvens efficacissimum;” and truly is its influence most efficacious. Let it be remembered also, that it stands alone, that it has no rival in the efficiency and the rapidity of its action.

I can readily believe that the cases in which I have employed it are most trivial, compared with those in which its powers may be required at the hands of the surgeon. To accelerate the healing of a bubo, by one fortnight or more, is something; but such examples sink into insignificance when placed in near comparison with the numerous instances of extensive deposit, attendant on the larger injuries; and, if the principle hold in the one case, why may it not in the other?

CASE XIV.

Thomas Edwards was admitted into Lazarus, with a bubo with gonorrhoea; the bubo suppurated, and was opened with the lancet. The wound became indolent; and, on April 10th, its edges were unhealthy, and the surrounding integument very dark, the consequence of previous inflammation. Pus abundant, but rather foetid. At this period of the case, I stated to some of the students, that it was probable the livid integuments around the sore were the great obstacle to its healing, and that several weeks might elapse before their partial disorganisation would be overcome, and healthy action re-established; that I would give him opium, and they might observe the effect. Accordingly, I ordered him the usual dose of half a grain, night and morning; and the following are the notes taken by his dresser:

14th. Appearances sufficiently improved to warrant the continuance of the opium.

18th. Pus healthy and inodorous; granulations florid and small; surrounding integument *rapidly regaining its natural colour*.

25th. The ulcer has entirely healed, and the colour of the surrounding integuments perfectly natural.

CASE XV.

John M'Carthy, aged twenty-one, was admitted into St. Bartholomew's Hospital, with a suppurating bubo in the left groin. It was somewhat advanced on his arrival, and involved in that morbid condition of integuments, which surround the advancing point of every abscess approaching the skin, a length of four inches and a breadth of two.

The abscess was opened at my request by two transverse incisions, and the matter discharged. At the end of a week, the part was quiet, the cavity presenting no appearance of granulations, the edges rounded and elevated, and the morbid integuments, partly undermined by the abscess, of a dusky red or bluish colour. My impression at this date, the 13th of June, was that, at least a fortnight to three weeks would elapse, before the integuments would regain their natural colour, or before those reparatory processes would be completed, by which they would be fitted to enter again into the healthy economy of the body; and that at least a fortnight would be required before the sore itself would present, at its base, the appearance of healthy granulations. These opinions I stated openly, to those who had watched with me the career of many previous cases, of the same kind.

I ordered this man half a grain of opium, night and morning. On the 16th, after four days' treatment, I

visited this patient, in common with the above gentlemen. The man's health was improved; he had no local pain. The cavity of the abscess was encroached on, by small florid granulations, which were raising their heads through the watery lymph-like substance covering the base. The integuments had resumed their natural colour and character from the upper and outer extremity of the discoloration, to within a quarter of an inch of the outer wound; and the same healthy change was in progress, in every other part of the circumference.

He was ordered to continue the pills. Tuesday, June 16th, health manifestly improved. The discoloured condition of the groin was so much reduced in magnitude, as to lead me for a moment to doubt the identity of the cure. It was confined to a small circle around the two incisions, and occupied the integuments between them, underneath which the two sores communicated. This band I divided. The whole aspect of the former disease bore the characters of perfect health, and the cavities were reduced to about one fourth part of their original size.

CASE XVI.

John Renshaw, aged twenty-eight, admitted June 13th, had a bubo in each groin, that in the right being somewhat advanced, but both had entered on the process of suppuration. The right was opened artificially. For the purpose of ascertaining the effect of opium on the left

groin, which was not sufficiently advanced to warrant the use of the lancet, I ordered this man opium in half grain doses. On the 16th, the right groin had benefited largely. The discoloured integuments were diminished in size, and the sore looked healthy and granulating. The left groin had already burst, spontaneously, and discharged a large quantity of matter. The skin around it extending upwards on to the abdomen, and down the thigh half way to the knee, was in a highly inflamed state. The opium was suspended, and an aperient and rest ordered. June 23rd, inflammation had subsided, and he was again ordered the opium pills.

I trust, I have been sufficiently explicit in stating the effects, which I feel warranted in assigning to opium, administered in moderate and continued doses. The mode in which these effects are accomplished, I have likewise endeavoured to explain, according to my views of its action.

This, however, may be deemed a matter of opinion, and as such, subject to that admirable adversity, which perhaps, necessarily characterises the views of those, professing to scrutinize the intricate economy of our nature.

I do not claim for this treatment, a title to be classed among the established principles of medical practice, but leave to others to confirm or reject, as they find it efficient, or nugatory.

Finally, I do not profess that opium is the antidote to *ulceration*, or that it will even arrest its course; nor would I recommend its administration in ulcers exhibiting florid granulations, so long as they pursue a healthy march towards cicatrization.

I conceive its use prejudicial in all cases indicating inflammatory action, whether during the progress of the ulcerative stage, or at any subsequent one, in which palpable and active hyperemia may be present. Much discernment is certainly not required, in selecting the description of cases, in which it is applicable. *But it is not to be indiscriminately used.* In my hands it has not proved invariably successful.

In cases similar to those in which I have successfully employed it, I do not doubt its general efficacy. Its more extended application is with me only theoretical, and may disappoint expectation.

Still, I will venture to presume, that the influence of opium,—I will not say on the remote arteries, nor on the absorbents, but on the complement of their actions, requires but the confirming voice of more extended professional authority, to become the agent of great practical good.

THE END.

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